In the Claims

Please cancel claims 1-11, 14-23, 27-31, 35, 36 and 41-48; amend claims 12, 13, 26, 34, and 37 -39; and add new claims 49-68 as follows:

Claims 1-11. (canceled)

12. (currently amended) A method according to claim 26, further comprising

defining a set of interpolation filters for use in connection with a particular prediction type.

13. (currently amended) A method according to claim 12, further comprising

providing an indication of a particular one of said set of interpolation filters to be used in motion compensated prediction of a block.

Claims 14-23. (canceled)

24. (previously presented) A method according to claim 26, implemented in a video encoder.

25. (previously presented) A method according to claim 26, implemented in a video decoder.

26. (currently amended) A method of motion compensated prediction, said method comprising:

selecting ~~in which~~ an interpolation filter to be used during motion compensated prediction of a picture block ~~is selected~~ in dependence on [[the]] a type of motion compensated prediction used for the picture block, wherein [[if]] the type of motion compensation prediction is either a single-picture type, in which a prediction for the picture block is formed using a single reference picture, or ~~used is~~ a multi-picture prediction type, in which a prediction for the picture block is formed using more than one

reference picture, and wherein the ~~selected~~ interpolation filter for the multi-picture prediction type has fewer coefficients than the interpolation filter ~~that is selected when the type of motion compensated prediction used is a~~ for the single-picture prediction type~~, in which a prediction for the picture block is formed using a single reference picture~~.

Claims 27-31. (canceled)

32. (previously presented) An apparatus according to claim 34, implemented in a video encoder.

33. (previously presented) An apparatus according to claim 34, implemented in a video decoder.

34. (currently amended) An apparatus for performing motion compensated prediction comprising:

means for selecting an interpolation filter to be used during motion compensated prediction of a picture block in dependence on [[the]] a type of motion compensated prediction used, wherein if the type of motion compensation used is a multi-picture prediction type, in which a prediction for the picture block is formed using more than one reference picture, said means for selecting an interpolation filter is operative to select an interpolation filter that has fewer coefficients than an interpolation filter that is selected when the type of motion compensated prediction used is a single-picture prediction type, in which a prediction for the picture block is formed using a single reference picture.

Claims 35-36. (canceled)

37. (currently amended) A video encoder comprising:

means ~~an apparatus~~ for performing motion compensated prediction, and ~~wherein said apparatus for performing motion compensated prediction comprises~~
means for selecting an interpolation filter to be used during motion compensated prediction of a picture block in dependence on the type of motion compensated prediction

used, and wherein if the type of motion compensation used is a multi-picture prediction type, in which a prediction for the picture block is formed using more than one reference picture, said means for selecting an interpolation filter is operative to select an interpolation filter that has fewer coefficients than an interpolation filter that is selected when the type of motion compensated prediction used is a single-picture prediction type, in which a prediction for the picture block is formed using a single reference picture.

38. (currently amended) A video decoder comprising:

means ~~an apparatus~~ for performing motion compensated prediction, ~~wherein said apparatus for performing motion compensated prediction comprises~~ and

means for selecting an interpolation filter to be used during motion compensated prediction of a picture block in dependence on the type of motion compensated prediction used, and wherein if the type of motion compensation used is a multi-picture prediction type, in which a prediction for the picture block is formed using more than one reference picture, said means for selecting an interpolation filter is operative to select an interpolation filter that has fewer coefficients than an interpolation filter that is selected when the type of motion compensated prediction used is a single-picture prediction type, in which a prediction for the picture block is formed using a single reference.

39 (currently amended). A coding system for coding a video sequence~~, the video sequence comprising a number of pictures, in which a picture of the video sequence is divided into blocks and a block of said picture is encoded using one of a number of different types of motion compensated prediction, including at least a single picture prediction type that employs motion compensated prediction to generate predicted pixel values for the block by using an interpolation filter operating on pixel values of a single reference picture in said video sequence and a multi picture prediction type that employs motion compensated prediction to generate predicted pixel values for the block by using an interpolation filter operating on pixel values of more than one reference picture in said video sequence~~, said system comprising:

a control module for

selecting a prediction type to be used in motion compensated prediction encoding of [[the]] a picture block, wherein the prediction type is either a single-picture prediction type in which a prediction for the picture block is formed using a single-reference picture or a multi-picture type in which the prediction for the picture block is formed using more than one reference pictures; and

selecting an ~~a module for changing the~~ interpolation filter based on the selected prediction type, wherein ~~if the type of motion compensation used is a multi-picture prediction type, in which a prediction for the picture block is formed using more than one reference picture, said means for selecting an interpolation filter is operative to select an~~ the interpolation filter for the multi-picture type ~~that~~ has fewer coefficients than [[an]] the interpolation filter ~~that is selected when the type of motion compensated prediction used is a~~ for the single-picture prediction type~~, in which a prediction for the picture block is formed using a single reference~~.

40. (currently amended) A coding system according to claim 39, wherein the ~~changing~~ control module is ~~also~~ further adapted to change the interpolation filter based on a characteristic of the block.

Claims 41-48. (canceled)

49. (new) A method of encoding a video sequence, said method comprising:

selecting an interpolation filter for use during motion compensated prediction of a picture block in dependence on a type of motion compensated prediction used, wherein if the type of motion compensation used is a multi-picture prediction type, in which a prediction for the picture block is formed using more than one reference picture, the selected interpolation filter has fewer coefficients than the interpolation filter that is selected when the type of motion compensated prediction used is a single-picture prediction type, in which a prediction for the picture block is formed using a single reference picture.

50. (new) A method according to claim 49, further comprising:

defining a set of interpolation filters for use in connection with a particular prediction type; and

providing an indication of a particular one of said set of interpolation filters to be used in motion compensated prediction of a block.

51. (new) A method according to claim 49, wherein the selection of the interpolation filter further depends upon a size of the motion compensated prediction block.

52. (new) A method according to claim 49, wherein the selection of the interpolation filter further depends upon a shape of the motion compensated prediction block.

53. (new) A method of decoding an encoded video sequence, the method comprising:

selecting an interpolation filter for use during motion compensated prediction of a picture block in dependence on the type of motion compensated prediction used, wherein if the type of motion compensation used is a multi-picture prediction type, in which a prediction for the picture block is formed using more than one reference picture, the selected interpolation filter has fewer coefficients than the interpolation filter that is selected when the type of motion compensated prediction used is a single-picture prediction type, in which a prediction for the picture block is formed using a single reference picture.

54. (new) A method according to claim 53, further comprising:

defining a set of interpolation filters for use in connection with a particular prediction type; and

retrieving from the encoded video sequence an indication of a particular one of said set of interpolation filters to be used in motion compensated prediction of a block.

55. (new) A method according to claim 53, wherein the selection of the interpolation filter further depends upon a size of the motion compensated prediction block.

56. (new) A method according to claim 53, wherein the selection of the interpolation filter further depends upon a shape of the motion compensated prediction block.

57. (new) A video encoder for encoding a video sequence, the encoder comprises:

a control module for selecting an interpolation filter for use during motion compensated prediction of a picture block in dependence on a type of motion compensated prediction used, wherein if the type of motion compensation used is a multi-picture prediction type, in which a prediction for the picture block is formed using more than one reference picture, said means for selecting an interpolation filter is operative to select an interpolation filter that has fewer coefficients than an interpolation filter that is selected when the type of motion compensated prediction used is a single-picture prediction type, in which a prediction for the picture block is formed using a single reference.

58. (new) An encoder according to claim 57, wherein the control module is further configured to define a set of interpolation filters for use in connection with a particular prediction type and, said encoder further comprises:

a multiplexer for providing an indication of a particular one of said set of interpolation filters for use in the motion compensated prediction of the picture block.

59. (new) An encoder according to claim 57, wherein the selection of the interpolation filter further depends upon the size of the motion compensated prediction block.

60. (new) An encoder according to claim 57, wherein the selection of the interpolation filter further depends upon the shape of the motion compensated prediction block.

61. (new) A video decoder for decoding an encoded video sequence, the decoder comprises:

a control module for selecting an interpolation filter for use during motion compensated prediction of a picture block in dependence on a type of motion compensated prediction used, wherein if the type of motion compensation used is a multi-

picture prediction type, in which a prediction for the picture block is formed using more than one reference picture, the selected interpolation filter has fewer coefficients than the interpolation filter that is selected when the type of motion compensated prediction used is a single-picture prediction type, in which a prediction for the picture block is formed using a single reference picture.

62. (new) A decoder according to claim 61, wherein the control module is further configured to define a set of interpolation filters for use in connection with a particular prediction type, said decoder further comprising:

a demultiplexer for retrieving from the encoded video sequence an indication of a particular one of said set of interpolation filters to be used in the motion compensated prediction of the picture block.

63. (new) A decoder according to claim 61, wherein the selection of the interpolation filter further depends upon a size of the motion compensated prediction block.

64. (new) A decoder according to claim 61, wherein the selection of the interpolation filter further depends upon a shape of the motion compensated prediction block.

65. (new) A method of encoding a video sequence, the method comprising:

determining a type of motion compensated prediction for a current block, the motion compensated prediction type indicating whether the prediction is derived from one reference block or from more than one reference block; and

selecting an interpolation filter based on the type of motion compensated prediction, wherein the interpolation filter for motion-compensated prediction from more than one reference block has fewer coefficients than the interpolation filter for motion-compensated prediction from one reference block.

66. (new) An encoder for encoding a video sequence, said encoder comprising:

a control module for

determining a type of motion compensated prediction for use in encoding of a current block, the motion compensated prediction type indicating whether the prediction is derived from one reference block or from more than one reference block; and

selecting an interpolation filter based on the type of motion compensated prediction, wherein the interpolation filter for motion-compensated prediction from more than one reference block has fewer coefficients than the interpolation filter for motion-compensated prediction from one reference block.

67. (new) A method of decoding an encoded video sequence, the method comprising:

retrieving an indication of a motion compensated prediction used for a current block from the bitstream;

determining a type of motion compensated prediction for the current block, the motion compensated prediction type indicating whether prediction is derived from one reference block or from more than one reference block; and

selecting an interpolation filter based on the type of motion compensated prediction, wherein the interpolation filter for motion-compensated prediction from more than one reference block has fewer coefficients than the interpolation filter for motion-compensated prediction from one reference block.

68. (new) A decoder for decoding an encoded video sequence, the decoder comprises:

a demultiplexer for

retrieving an indication of a motion compensated prediction used for a current block from the bitstream; and

determining a type of motion compensated prediction for the current block, the motion compensated prediction type indicating whether prediction is derived from one reference block or from more than one reference block; and

a control module for selecting an interpolation filter based on the type of motion compensated prediction, wherein the interpolation filter for motion-compensated prediction from more than one reference block has fewer

coefficients than the interpolation filter for motion-compensated prediction from one reference block.